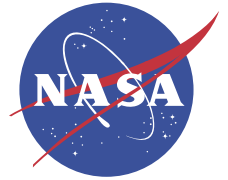


# Robotic Space Exploration: Moon, Mars and Beyond

Public Lecture Series, July 6 - July 28, 2005

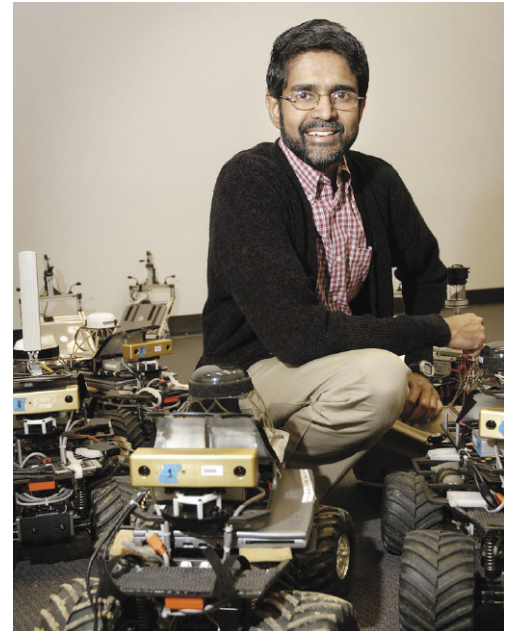


**7:30 pm, Thursday, July 28**  
**NASA Goddard Visitor Center Auditorium**

## *Intelligent Robots: R2-D2 to Spirit, Opportunity and Beyond*

**Dr. Vijay Kumar**

UPS Foundation Professor  
University of Pennsylvania



### **Abstract**

How close has the field of robotics come to realizing the vision that Luke Skywalker's resourceful droid, R2-D2, brings up in everyone's mind? How do the MARS Rovers Spirit and Opportunity which have been autonomously navigating on Mars for over a year measure up to this expectation? This talk will provide a historical perspective of robotics, briefly describing the role that robots have in the manufacturing and service industry. It will discuss challenges in fielding practical systems from personal assistive robots to robots that can operate in hazardous environment.

### **Short Biographical Sketch**

VIJAY KUMAR received his Ph.D. in Mechanical Engineering from The Ohio State University in 1987. Since then he has been on the faculty at University of Pennsylvania. He is currently the UPS Foundation Professor in the School of Engineering and Applied Science, and the Chair of Mechanical Engineering and Applied Mechanics. Dr. Kumar's research interests lie in the area of robotics and networked multi-agent systems. He directs the GRASP Laboratory, a multidisciplinary robotics and perception laboratory and is also a co-founder of Bio Software Systems, a start-up company in Camden commercializing novel software tools for the analysis of regulatory networks. He is the recipient of the 1991 National Science Foundation Presidential Young Investigator award, the Lindback Award for Distinguished Teaching, the 1997 Freudenstein Award for significant accomplishments in mechanisms and robotics and the 2004 IEEE International Conference on Robotics and Automation Kawamori Best Paper Award.

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Admission is free. Please RSVP online to reserve a spot.

<http://university.gsfc.nasa.gov/robotics/>

For questions contact us by phone at 301-286-2893/ 1893 or by email at [LRana@pop600.gsfc.nasa.gov](mailto:LRana@pop600.gsfc.nasa.gov)

*"Robotic Space Exploration: Moon, Mars and Beyond" is a public lecture series in conjunction with the 2005 NASA Robotics Internship Program.*